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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/578,140	05/24/2000	Dion Horvat	991323	4685

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EXAMINER	
WAHBA, ANDREW W	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 04/20/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/578,140	HORVAT ET AL.	
	Examiner	Art Unit	
	Andrew W Wahba	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With respect to claim 7, the phrase "multiple of fraction" renders the claim indefinite (claim 7, line 5). The frame duration for data transmission that is a multiple of fraction can be any duration of time.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over West. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by West. With regard to claim 1, West makes known a method of TDMA communication in the presence of periodic interference. During data transmission, West detects bursts of interference and proceeds to transmit data so as to avoid the interference by reassigning time-slots (column 61, lines 15-42). West employs two time-slots for communication in the presences of interference bursts (interference burst). While communicating in one transmission time (first assigned time slot), communication resumes in a second transmission time (second time slot) after the interference ends

(column 62, lines 14-18). West does not disclose transmitting a redundant copy of the data packet within the second time slot. West, however, discloses redundant transmission (redundant copy) (column 22, lines 30-33). A person of ordinary skill in the art would have been motivated to transmit a redundant copy of the data packet on the second time slot so as to reduce transport delay (column 22, lines 30-33). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to transmit a redundant copy of the data packet within the second time slot as described in claim 1.

Regarding claim 2, West discloses a method of TDMA communication in the presence of periodic interference. West detects (detecting) periodic interference (periodic bursts of the interference) and proceeds to transmit data so as to avoid the interference by reassigning time-slots (column 61, lines 15-42). West utilizes two time-slots for communication in the presences of interference bursts. While communicating in one transmission time (first time slot), communication resumes in a second transmission time (second time slot) after the interference abates (column 62, lines 14-18). When West recognizes that the interference is periodic, data is transmitted only at times when the interference is not expected to be present (column 61, lines 15-42). West does not disclose transmitting a redundant copy of the data packet on the second time slot. West, however, discloses redundant transmission (redundant copy) (column 22, lines 30-33). A person of ordinary skill in the art would have been motivated to transmit a redundant copy of the data packet on the second time slot so as to reduce transport delay (column 22, lines 30-33). At the time the invention was made, therefore,

it would have been obvious to one of ordinary skill in the art to which the invention pertains to transmit a redundant copy of the data packet on the second time slot as described in claim 2.

With respect to claim 3, West presents the use of error rate monitoring to determine whether or not periodic interference is present. Signal strength and packet error rates are monitored (observing) to determine whether or not interference is present. In the event that interference is present, the device further determines whether or not the interference is periodic or simply sporadic. To determine (determining) if the interference is periodic, West compares the timing of the increased signal strength and error rates with that of a sync circuit connected to the AC power source. If the errors coincide with the sync waveform, the interference is thought to be periodic (column 62, lines 23-47).

Regarding claim 4, West discloses a method to ascertain whether or not the interference is periodic comparing (observing) the timing of the interference with that of the AC power source (AC power source). To determine whether or not the interference is periodic, West compares the timing of the increased signal strength and error rates with that of a sync circuit connected to the AC power source. If the errors coincide with the sync waveform, the interference is thought to be periodic (Figure 45, column 61, lines 23-33, column 62, 23-47).

Regarding claim 5, West employs two thresholds to monitor interference and determine whether or not periodic interference is present. First, the signal strength (first threshold) is compared (determining) to a threshold. In the event that the signal

strength is higher than expected, the data packet error rate (second threshold) is compared (determining) to a threshold. In the event that both the received signal strength and data packet error rated exceed their respective thresholds, West proceeds to determine whether or not the interference is periodic (Figure 51. and column 62, lines 22-35).

With respect to claim 6, West presents a computer controller that interfaces with the transceiver in either the mobile unit (first transceiver) or the base station (second transceiver). Among the tasks that the computer controller performs at either the base station or the mobile unit is the assignment (indication) of time slots to avoid communications of data packets during interference (column 61, lines 23-42).

With regard to claim 7, West presents a method of TDMA communication in the presence of periodic interference. During data transmission, West detects (detecting) bursts of interference and proceeds to transmit data so as to avoid (synchronizing) the interference by reassigning time-slots (column 61, lines 15-42). After a burst of interference occurs, West determines whether or not the interference is periodic. In the event that the interference is periodic, time slots are assigned for communication such that they do not coincide with the expected interference bursts (column 61, lines 23-33, column 62, 23-47). West does not disclose transmitting a redundant copy of the data packet on another time slot. West, however, discloses redundant transmission (redundant copy) (column 22, lines 30-33). A person of ordinary skill in the art would have been motivated to transmitting a redundant copy of the data packet on another time slot so as to reduce transport delay (column 22, lines 30-33). At the time the

invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to transmit a redundant copy of the data packet on the second time slot as described in claim 7.

With regard to claim 8, West discloses information that is transmitted in the form of data packets (data packet) (column 19, lines 12-14).

With regard to claim 9, West presents a computer controller that interfaces with the transceiver in either the mobile unit or the base station. Among the tasks that the computer controller performs at either the base station or the mobile unit is the assignment (assigning) of time slots to avoid communications of data packets during interference (column 61, lines 23-42).

With regard to claim 10, West discloses that the periodic interference source is a microwave (microwave) oven (column 61, lines 23-24).

Response to Arguments

5. Applicant's arguments filed 01/17/04 have been fully considered but they are not persuasive. With respect to there 112, second paragraph rejection of claim 7, the applicant changed the phrase "multiple or fraction" to "multiple of fraction" (line 5). The claim remains vague and indefinite as the frame duration for data transmission that is a "multiple of fraction" can be any duration of time.

With respect to the 102(b) rejection of claims 1, 2 and 7, the applicant added the claim limitation that the same information is sent twice. West further discloses redundant transmission (redundant copy) (column 22, lines 30-33).

With respect to the argument that West does not recognize two distinct interference profiles, the applicant does not claim a recognition means or step for recognizing two distinct interference profiles.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew W Wahba whose telephone number is (703) 305-4684. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrew Wahba AW

April 13, 2004

CHAU NGUYEN
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